

TASK
4

Name

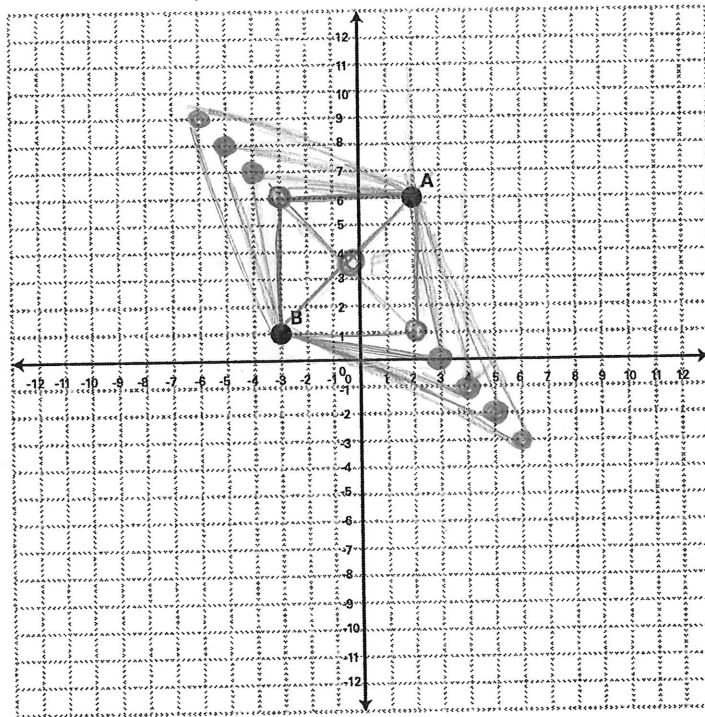
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Excelleration

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Building a New Playground

The City Planning Commission is considering building a new playground. They would like the playground to be equidistant from the two elementary schools, represented by points A and B in the coordinate grid that is shown.



$$A(2, 6)$$

$$B(-3, 1)$$

$$D(3, 0)$$

$$\sqrt{(3 - (-3))^2 + (0 - 1)^2}$$

$$\sqrt{(6)^2 + (-1)^2}$$

$$\sqrt{36 + 1}$$

$$\sqrt{37}$$

$$6.08 = \overline{BD}$$

$$\sqrt{(3 - 2)^2 + (0 - 6)^2}$$

$$\sqrt{(1)^2 + (-6)^2}$$

$$\sqrt{1 + 36}$$

$$\sqrt{37}$$

$$6.08 = \overline{AD}$$

PART A

- There are an infinite number of points that are equal distance from A and B.
- Determine at least three possible locations for the park that are equidistant from points A and B. Explain how you know that all three possible locations are equidistant from the elementary schools.
 - Make a conjecture about the location of all points that are equidistant from A and B. Prove this conjecture.

For E I found the midpoint. Then I drew a square and made 10 points equal distance away. If the line bisects points E, C, & D then it will have a constant line of points that are equal distance.